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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,457	06/01/2001	Michael I. Catherwood	18153.0042	8463

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EXAMINER

O BRIEN, BARRY J

ART UNIT	PAPER NUMBER
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2183

DATE MAILED: 04/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/870,457

Applicant(s)

CATHERWOOD ET AL.

Examiner

Barry J. O'Brien

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/01/01, 10/30/01, 11/16/01, 1/23/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-4 have been examined.

Papers Submitted

2. It is hereby acknowledged that the following papers have been received and placed on record in the file: Declaration and Fee as received on 10/30/2001, IDS as received on 11/16/2001, and IDS as received on 1/23/2003.

Oath/Declaration

3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.
4. The oath or declaration is defective because it lists an incorrect title. The title of the invention on the submitted Declaration is "Microcontroller Instruction Set", but the title of the instant application as submitted is "Digital Signal Controller Instruction Set and Architecture".

Specification

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

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6. The applicant is requested to review the specification and update the status of all co-pending applications made mention of, replacing attorney docket numbers with current U.S. application or patent numbers when appropriate.
7. The disclosure is objected to because of the following informalities:
 - a. The appendix submitted by the Applicant is improper. The appendix does not contain a program listing or table, but rather is mainly an instruction set definition (see 37 CFR 1.52(e) and MPEP § 608.05, and for Computer program listings (37 CFR 1.96(c)). Furthermore, the content of the submitted appendix does not further enable one of ordinary skill in the art to make or use the invention as claimed. Therefore, it is requested that the Applicant either cancel the submission of the appendix, or amend the specification to add the contents of the appendix to the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
9. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
10. Claim 4 recites the limitation "the designated encoding" on its second line. There is insufficient antecedent basis for this limitation in the claim. For the purposes of this

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examination, the Examiner will assume that the “designated encoding” of the instruction is the instructions opcode.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-4 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Carlson et al., U.S. Patent No. 4,090,250.

13. Regarding claim 1, Carlson has taught a processor for executing an instruction set comprising the designated instruction set (see Col.3 lines 6-9), the processor comprising:

- a. A program memory (30 of Fig.2) for storing program instructions including instructions from the designated instruction set (see Col.3 lines 6-13),
- b. A program counter (34 of Fig.3) for determining current instruction for processing (see Col.3 lines 17-24),
- c. Registers (46 of Fig.3) for storing operand data specified by the program instructions (see Col.4 lines 5-15 and Col.7 lines 6-10, 19-25),
- d. At least one instruction execution unit (70 of Fig.3) for executing the current instruction (see Col.4 line 50 - Col.5 line 9).

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14. Regarding claim 2, Carlson has taught the processor according to claim 1, wherein the at least one execution unit includes a digital signal processing engine (see Col.1 line 56 – Col.2 line 32 and Col.3 lines 6-9).

15. Regarding claim 3, Carlson has taught the processor according to claim 1, wherein the at least one execution unit includes an arithmetic logic unit (70 of Fig.3) (see Col.4 line 50 – Col.5 line 9).

16. Regarding claim 4, Carlson has taught the processor according to claim 1, wherein each designated instruction is identified to the processor by the designated encoding (see Col.6 lines 14-35).

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is reminded that in amending in response to a rejection of claims, the patentable novelty must be clearly shown in view of the state of the art disclosed by the references cited and the objections made. Applicant must also show how the amendments avoid such references and objections. See 37 CFR § 1.111(c).

18. Lynch, Jr. et al., U.S. Patent No. 4,025,771, has taught a pipelined digital signal processor comprising registers, program memory, a program counter and an arithmetic logic unit for instruction execution.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry J. O'Brien whose telephone number is (703) 305-5864.

The examiner can normally be reached on Mon.-Fri. 6:30am-4:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Chan can be reached on (703) 305-9712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Barry J. O'Brien
Examiner
Art Unit 2183

BJO
4/16/2004



EDDIE CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100